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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,951	10/22/2003	Gregory Hackman	98731-000001/US	4019
30593	7590	05/24/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			ALI, MOHAMMAD M	
P.O. BOX 8910			ART UNIT	
RESTON, VA 20195			PAPER NUMBER	
			3744	

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/689,951

Applicant(s)

HACKMAN ET AL.

Examiner

Mohammad Ali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-1-16 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-14 is/are rejected.  
7) ☒ Claim(s) 15-16 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "light emitting diode" for claims 2, 5, 12, 16 and "voltage signal" for claims 9, 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6-11, 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Sillat, Diethard (DE 4420621 A1). Sillat, Diethard discloses a cryogenic fluid distribution device comprising a fluid flow passage 8/10 for distributing cryogenic fluid 5 to an apparatus/manometer 12, the over flow passage supplying fluid from tank 3 is positioned downstream of the apparatus 12; and a sensor positioned in the manometer 12 (See page 4, lines 5-6 and 15-19 in the enclosed translation) with the overflow passage 10, connected to a controller K through tube 13, pneumatic operating member P3 and connecting line C, the sensor having an active component for determining if fluid is present in the overflow line 10, inlet and outlet line 6 for the reservoir 1, inlet and outlet of a cooled device (inherent because while delivering the cryogen 5 from reservoir to any device should be cooled device and must have inlet and outlet line). See Fig. 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sillat, Diethard in view of McCulloch et al., (6,016,697). Sillat, Diethard discloses the invention substantially as claimed as stated above. However, Sillat, Diethard does not disclose light emitting diode. McCulloch et al., teach the use of a light emitting diode (LED) 274, 276, 278 in a fluid sensing system of a cryogenic storage tank 100 through a controller 200 for the purpose of sensing presence of fluid. See Fig.1, 6 and column 6, lines 47 to column 8, line 8. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cryogenic fluid distribution system of Sillat, Diethard in view of McCulloch et al., such that a light emitting diode could be provided in order to act as an active component for determining presence of fluid.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sillat, Diethard in view of Maric (5,142,874). Sillat, Diethard discloses the invention substantially as claimed as stated above. However, Sillat, Diethard does not disclose a hole intersecting a through passage. Maric teaches the use a hole containing a sensor 70 intersecting a through passage 24 in a cryogenic apparatus for the purpose of

holding a sensor 70 and sensing fluid temperature. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cryogenic fluid distribution system of Sillat, Diethard in view of McCulloch et al., such that a hole intersecting a fluid passage could be provided in order to act as an active component for determining presence of fluid temperature.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sillat, Diethard in view of Maric as applied to claim 3 and 4 above and further in view of McCulloch et al., (6,016,697). Sillat, Diethard in view of Maric discloses the invention substantially as claimed as stated above. However, Sillat, Diethard in view of Maric does not disclose light emitting diode. McCulloch et al., teach the use of a light emitting diode (LED) 274, 276, 278 in a fluid sensing system of a cryogenic storage tank 100 through a controller 200 for the purpose of sensing presence of fluid. See Fig.1, 6 and column 6, lines 47 to column 8, line 8. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cryogenic fluid distribution system of Sillat, Diethard in view of Maric and further in view of McCulloch et al., such that a light emitting diode could be provided in order to act as an active component for determining presence of fluid.

#### ***Allowable Subject Matter***

Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

Applicant's arguments filed 04/20/05 have been fully considered but they are not persuasive. It is also not persuasive to The Examiner that an English language abstract of an IDS provided by the Applicant is not understandable and on the plea for want of the whole translation of the IDS the rejection is traversed. However, the translation is hereby enclosed which will make clear about the supply line and the sensor for the claimed invention as. Therefore, the rejections are proper. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is (571) 272-4806. The examiner can normally be reached on Monday to Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-4834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mohammad M. Ali  
May 16, 2005